

**REMARKS**

The Office action dated February 5, 2004 and the cited references have been carefully considered.

**Status of the Claims**

Claims 1-4, 6-12, and 14-18 are pending.

Claims 3, 4, 8, 11, 12, and 16 are allowed. Claims 2 and 10 are objected to as referring to a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 2 and 10 have been rewritten in independent form to include all of the limitations of the base claim and any intervening claims. Therefore, claims 2 and 10 are now in condition for allowance. Early allowance of these claims is respectfully requested.

Claim 17 is rejected under 35 U.S.C. § 102(b) as being anticipated by Forsdyke et al. (U.S. Patent 5,952,78; hereinafter "Forsdyke"). Claims 1, 6, 7, 9, 14, 15, 17, and 18 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Watanabe et al. (U.S. Patent 5,801,483; hereinafter "Watanabe") in view of Allen et al. (U.S. Patent 3,858,378; hereinafter "Allen"). The Applicants respectfully traverse this rejection for the reasons set forth below.

**Claim Rejection Under 35 U.S.C. § 102(b)**

Claim 17 is rejected under 35 U.S.C. § 102(b) as being anticipated by Forsdyke. The Applicants respectfully traverse this rejection because Forsdyke does not teach each and every element of claim 17.

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a *single* prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987) (emphasis added). "The identical invention must be shown in as complete detail as is contained in the . . . claim." *Richardson v. Suzuki Motor Co.*, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989).

Forsdyke teaches an amalgam that includes mercury, tin, lead, and another metal selected from the group consisting of silver, magnesium, copper, gold, platinum, and nickel. See; e.g., Forsdyke's abstract. An amalgam is an alloy of metals, specifically an alloy of mercury. See; e.g., D.N. Lapedes, McGraw-Hill Dictionary of Scientific and Technical Terms, 2d. ed., McGraw-Hill Book Company, New York, New York (1978). The purpose for an amalgam is to control the vapor pressure of the volatile mercury metal. See; e.g., Forsdyke; column 1, lines 55-62; column 2, lines 8-12. Therefore, the other components of an amalgam are also metals in order to form an alloy (i.e., intimate solution) of the metals. Components that do not form alloys with mercury metal cannot form an amalgam because they would exist physically separately and cannot control the vapor pressure of mercury. (This is a consequence of Raoult's law of thermodynamics.) And metal compounds do not form amalgams with mercury metal. Therefore, Forsdyke does not disclose compounds of silver or gold.

In contradistinction, claim 17 recites silver compounds, gold compounds, and combinations thereof.

Since Forsdyke does not teach the exact composition recited in claim 17, Forsdyke does not anticipate claim 17.

#### **Claim Rejection Under 35 U.S.C. § 103(a)**

Claims 1, 6, 7, 9, 14, 15, 17, and 18 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Watanabe in view of Allen. The Applicants respectfully traverse this rejection because a combination of Watanabe and Allen does not teach or suggest all of the limitations of each of claims 1, 6, 7, 9, 14, 15, 17, and 18.

"To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art." "All words in a claim must be considered in judging the patentability of that claim against the prior art." MPEP § 2143.03 (8<sup>th</sup> ed., Rev. 1, Feb. 2003).

Watanabe merely discloses a low-pressure mercury vapor discharge lamp. The Examiner even admitted that Watanabe is silent regarding a sealing composition comprising

a silver compound, a gold compound, or combinations thereof, as is recited in each of claims 1, 6, 7, 9, 14, 15, 17, and 18.

Although Allen teaches an annulus of silver metal, Allen does not teach or suggest silver compounds, as is recited in each of claims 1, 6, 7, 9, 14, 15, 17, and 18. The Applicants respectfully traverse the Examiner's assertion that Allen discloses a sealing compound comprising a silver compound. Nowhere in Allen's disclosure, especially the portions of Allen's disclosure that the Examiner cited, does he teach or suggest a silver compound. Instead, it is clear that Allen teaches only silver metal. Annulus 6 of Allen is a solderable hermetic, non-oxidizing material. Column 2, lines 27-30. First, a solderable material is an alloy of low-melting metals. Second, Allen specifically discloses that the material is non-oxidizing. In other words, he does not want his material to turn into an oxide, which is a compound. Thus, Allen could not have suggested a compound because it would be contrary to his objective to have a non-oxidizing solderable metal. *In re Gordon*, 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984) ("[I]f a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification."). Therefore, Allen does not teach and cannot be construed to teach or suggest a compound, as recited in claims 1, 6, 7, 9, 14, 15, 17, and 18.

As further evidence that Allen does not suggest a silver compound, Allen teaches that a "conductive silver composition" was used. Column 2, lines 42-43. Silver compounds are not conductive. Therefore, Allen excludes these compounds.

Since Allen does not teach or suggest compounds, particularly silver compounds or gold compounds, a combination of Allen and Watanabe does not teach or suggest all of the limitations of each of claims 1, 6, 7, 9, 14, 15, 17, and 18. Consequently, these claims are patentable over Watanabe in view of Allen under 35 U.S.C. § 103(a).

In view of the above, it is submitted that the claims are patentable and in condition for allowance. Reconsideration of the rejection is requested. Allowance of claims at an early date is solicited.

Respectfully submitted,

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